

Linguistic Prehistory

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IN 1984 MICHAEL MORATTO DEVOTED THE CONCLUDING chapter of his influential textbook to the presentation of a comprehensive model of the linguistic prehistory of California. While admittedly a “working model, subject to verification and change as more and better data are brought to bear” (1984:530), this was the first general synthesis since the days of Dixon and Kroeber (1919) of the findings of California Indian historical linguistics, and as such it has had an enduring impact on the thinking of archaeologists and linguists, including my own. Moratto makes the following key points:

- The geolinguistic mosaic of the ethnographic period, with its startling diversity of languages and language families, surely implies that “repeated population shifts” have occurred in this region (Moratto 1984:531). Migrations into, out of, and within the California culture province must play a significant role in California prehistory; in situ developments can account for only a small part of the observed linguistic diversity.
- The primary evidence for these prehistoric movements consists of language family relationships, and in particular the deepest of these relationships: the Uto-Aztecan family, the Algic superfamily, the Penutian stock, and the Hokan stock. (To this I would add the residuum of languages not affiliated with any of the preceding, specifically the Yukian and Chumash languages.)
- The absolute chronology of the internal diversification within language family relationships is to some extent retrievable from the degree of diversity shown, either by formal methods such as glottochronology or by informal comparisons to known historical cases. While calibrating linguistic dates with archaeological dates is fraught with multiple difficulties, some correlations are clearly more probable than others, and where there is a congruence of linguistic and archaeological dates the correlation may be considered firm.
- The linguistic prehistory of California must be viewed in the broader context of the known or probable historical relationships among the languages of North America, and possibly of the entire hemisphere. As Moratto succinctly puts it, “Cal-

ifornia was neither an island nor a cul de sac, and its linguistic configurations can be understood only with reference to a larger sweep of prehistory” (1984:543).

To these points I would add one more:

- In addition to the inferences we can draw from comparative data, the evidence of interinfluence between languages and language families is often of crucial importance in understanding the linguistic prehistory of a region. This evidence includes both borrowed words and borrowed phonological and grammatical structures, and it occurs both between adjacent languages and—most important for historical purposes—between a language formerly spoken in some territory (the “substrate” language in the jargon of historical linguistics) and the language that has replaced it.

I review below the six primary language family relationships represented in aboriginal California and propose a reconstruction of prehistoric events and developments that would account for the observed linguistic situation. In some cases my proposals do not noticeably differ from those put forward by Moratto. Where they diverge to some degree or another, this largely reflects perspectives derived from more recent linguistic studies.¹

ATHABASKAN

The languages of the Athabaskan family (Figure 6.1), although widely dispersed in western North America, are only shallowly differentiated. The family apparently has a time depth of little more than two millennia (Krauss and Golla 1981). The most widely accepted reconstruction situates the proto-Athabaskan homeland along the upper Yukon River in the interior of northern British Columbia and the southern Yukon. Adjacent groups on the coast to the west and south spoke related languages, ancestral to modern Eyak, Tlingit, and Haida, reflecting the diversification of a Na-Dene speech community that probably entered North America about 6,000 years ago (Fortescue 1998).



Figure 6.1. Oregon and California Athabaskan subfamilies.

At some date subsequent to 2,000 years ago groups of Athabaskan speakers—small bands of boreal forest hunters and riverine fishermen—began moving south from central British Columbia, eventually following the Columbia River to the Pacific.² This movement was roughly coincident with the spread of a microblade tradition in this area that can be associated with innovative bow and arrow technology, and lexical evidence within Athabaskan indicates that these migrants were familiar with the sinew-backed bow. Either as part of this Columbia River migration or soon thereafter, Athabaskan-speaking groups moved south along the coastal mountains into southwestern Oregon and northwestern California, where dialects ancestral to the Oregon and California Athabaskan subfamilies appear to have become separated about 1,300 years ago.

In southwestern Oregon, the Athabaskans rapidly infiltrated the eastern side of the coastal mountains from the Umpqua Valley south to the Illinois Valley, displacing earlier Kalapuyan, Takelma, and possibly Wintuan and Algic inhabitants. A largely in situ differentiation into a dialect chain then followed, with the Upper Umpqua, Upper Coquille, and Galice-Applegate languages representing the continuation of this core area into the historical period. Occupation of the Curry and Del Norte County coastline resulted from a slow, secondary expansion downstream along the Coquille, Rogue, and Smith Rivers, which prob-

ably absorbed Coosan-speaking populations in the north and Algic speakers farther south. The Chetco-Tolowa language at the southern end of this coastal strip has numerous distinctive traits, probably reflecting the rapid transformation of a Rogue River dialect in a multilingual setting where the majority of speakers were non-Athabaskans.

In northwestern California, after an initial occupation of the area between the Van Duzen River and the upper Eel River, a largely in situ differentiation seems to have occurred, resulting in a dialect chain in which the Nongatl, Lassik, Sinkyone, and Wailaki “languages” (more accurately, local dialects) are the ethnographically attested variants. Secondary expansions resulted in three clearly marked-off languages: Hupa-Chilula to the northeast along the middle and lower Trinity River, Mattole and Bear River in the windswept coastal valleys near Cape Mendocino, and Kato in Cahto Valley at the head of the South Fork of the Eel.

The pattern of diversification suggests an early split between the Hupa-Chilula language and the rest, but since at least one important grammatical innovation links Hupa-Chilula specifically to Kato, the dialectal groups may have had a different geographical relationship during early stages of differentiation. A Chimariko substratum is likely for the dialects of Hupa-Chilula spoken along the Trinity River, reflecting an expansion of Hupa eastward into Chimariko territory that was still under way at the beginning of the historical period. However, at least some of the distinctive phonological traits of Hupa-Chilula are better explained by Karuk or Wiyot influence. A Yukian substratum beneath both Wailaki and Kato is likely on cultural and other nonlinguistic grounds, but specific linguistic influences from Yukian are not easy to identify in either language, other than a few Yuki loanwords in Kato.

ALGIC

Yurok and Wiyot were spoken in adjacent territories on the heavily forested northwestern coast of California from the Klamath River to the Eel River (Figure 6.2). The relationship of Yurok and Wiyot was recognized by Dixon and Kroeber (1913), who called it the Ritwan family, a coinage based on the cognate stems for “two” in both languages (Dixon and Kroeber 1919:54). The proposal first made by Sapir (1913) that the two languages are distantly related to the Algonquian family, although controversial at first, is now considered to be proven (Goddard 1975). Yurok, Wiyot, and Algonquian are assigned to a superfamily or stock variously called Algic, Algonquian-Ritwan,

or Wiyot-Yurok-Algonquian; I will use "Algic" here. The Algic stock was assumed at first to be a binary relationship between the Ritwan languages and Algonquian, but this has become less certain with the accumulation of more accurate descriptive data. While some continue to believe a Ritwan branch is justified (Berman 1984, 1990), Proulx, the linguist who has given the matter the most sustained attention, finds the evidence unconvincing and treats Wiyot, Yurok and Algonquian as three equally old branches of Algic (Proulx 1994:152–153).

Estimates of the time depth of Algonquian generally place the dispersal of the family around 3,000 years ago (Proulx 1981:14). The time depth of Algic must be greater, although not dramatically so; 4,000 years ago seems reasonable. If Algonquian, Wiyot, and Yurok are separate branches of Algic, this would of course also be the date of the Yurok-Wiyot split. If Ritwan is a valid subgroup, the time depth of the Yurok-Wiyot split could be shallower, perhaps around the 2,300 years indicated by Swadesh's lexicostatistical calculation (1959).

The hypothetical proto-Algic homeland that best fits the linguistic facts is on the Columbia Plateau, somewhere in the region historically occupied by the Sahaptians and the Interior Salish.³ From here, the proto-Algonquians could have expanded east to the Plains and beyond, while the early "Ritwans" could have moved south and west. Algic speakers might well have occupied large portions of western Oregon for several hundred years before the Athabaskans entered the area around 1,300 years ago. In this location they would have been on the southern periphery of northwest coast cultural developments, helping to explain, among other cultural parallels, the unusual congruence in kin term systems between the Yuroks and Wiyots and the Coast Salish, Chimakuan-, and Wakashan-speaking peoples of Puget Sound and Vancouver Island (Kroeber 1934).

Archaeologists have frequently speculated that the appearance of the sophisticated fishing technology of the Gunther Complex in northwestern California between 1,500 and 1,100 years ago must somehow be correlated with the intrusion of Algic- and Atha-



Figure 6.2. California Algic languages (Ritwan).

baskan-speaking groups into the area from the north. One possibility is that Athabaskan incursions into California and Oregon around 1,300 years ago triggered a southward movement of Algic speakers along the coast, bringing them and the Athabaskans into northwestern California roughly simultaneously.

For this scenario to be correct, however, either the ancestors of the Wiyots and Yuroks would have had to enter their historic areas already speaking well-differentiated languages, or the processes of linguistic change would have had to work on these languages with unprecedented speed. A more likely reconstruction would have speakers of early Wiyot arriving in the Humboldt Bay area considerably earlier than ancestral Yurok speakers in the Klamath River area. Historic Wiyot would be the surviving segment of a continuum of Algic speech that stretched from the central Oregon coast to Cape Mendocino in pre-Gunther Complex times. Yurok, on the other hand, would represent the speech of a group originally located much farther north in the Algic language chain, displaced to the Klamath River after 1,300 years ago as a consequence of the Athabaskan invasion. The appearance of the

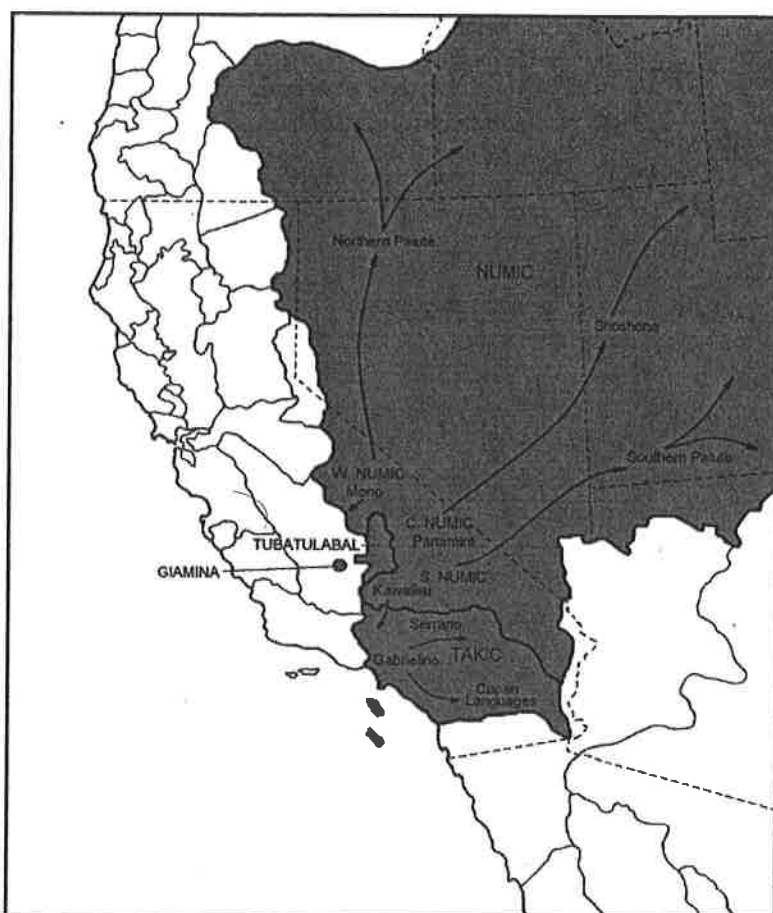


Figure 6.3. California Uto-Aztecan groups (Numic, Takic, Tubatulabal).

Gunther Complex in northwestern California could thus be linked to the arrival of Yurok speakers in particular, not of the Algic languages in general.

This reconstruction is in essential agreement with the one proposed by Whistler (1979) and summarized in Moratto (1984:481–484). However, Whistler puts the Wiyot arrival around 1,100 years ago, the Yurok about 900 years ago, and Athabaskan entry as late as 700 years ago. However, these dates are too recent to explain the existing linguistic differences, particularly between California and Oregon Athabaskan. I would propose cal A.D. 100 or earlier for the original Algic spread down the coast and the settlement of early Wiyots on Humboldt Bay, cal A.D. 700 to 800 for the arrival of the Yuroks on the Klamath River, and no later than cal A.D. 800 to 900 for the intrusion of Athabaskans into the Trinity-Eel drainage.

UTO-AZTECAN

The Uto-Aztecan (UA) language family (Figure 6.3) is one of the geographically most extensive in the Americas and probably has a time depth of about 5,000 years (Campbell 1997:133). The deepest internal divi-

sion is between the northern branch, comprising the languages in California, the Great Basin, and the Pueblo Southwest, and the southern branch, extending from O'odham in southern Arizona to Pipil in Central America. The origin of the northern-southern UA split (as well as its implications for early migrations either from north to south or south to north) is not fully understood.⁴ However, most specialists agree that by 3,500 to 2,500 years ago, dialects of the northern UA branch were probably spoken in a continuous band across the southern basin from the Colorado River to the Sierra Nevada, with a distinction slowly emerging between an eastern group ancestral to Hopi and the Numic subfamily and a western group ancestral to Tubatulabal and the Takic subfamily (Hale and Harris 1979:175). It is not unlikely that this east-west split was correlated with the northward expansion of Yuman along the Colorado River after 2,500 years ago.

Tubatulabal is a single language spoken ethnographically along the upper Kern River northeast of Bakersfield. While Tubatulabal has a closer affinity to the Takic languages than to Numic or Hopi, the distinctive features of Tubatulabal seem best explained as representing the in situ development of a local variety of Northern UA. The Takic languages appear to stem from another variety of Northern UA that was originally spoken close by, most likely in the region around Tehachapi Pass occupied by Kitanemuk speakers in the historic period. A third Californian variety of Northern UA is possibly attested in Giamina or Omomil, the poorly attested language of a small group that lived west of Tubatulabal territory near the Poso Creek Yokuts (Kroeber 1907:126–128).

Most of Takic territory in southern California appears to have been occupied by Uto-Aztecan speakers in a series of relatively late expansions from the northeast. Moratto's proposal (1984:165) that the end of the Early Period in the Serrano and Gabrielino area, ca. 3,500 to 3,200 years ago, correlates with the beginning of the Takic expansion seems somewhat early. Although Miller has calculated deeper glottochronological dates (1983:119), the internal diversity of

the attested Takic subfamily strikes most linguists as roughly comparable to that of the Romance languages, or approximately 2,000 years (Jacobs 1975:5). The differences are somewhat greater among the languages in the northern half of Takic territory (Gabrielino, Serrano-Kitanemuk, and perhaps Tataviam) than in the south (Luiseño, Cupeño, and Cahuilla—the “Cupan” languages), making it likely that ethnographic Cupan territory reflects a fairly recent Uto-Aztecan intrusion, probably within the last millennium. Since the Cupan languages show closer affinities with Gabrielino than with Serrano, this subgroup probably originated on the southern and eastern borders of Gabrielino territory and expanded southward along the coast and eastward through San Geronio Pass. Yuman traits in the phonologies of the Cupan languages suggest that at least part of the territory into which Cupan expanded was previously occupied by speakers of Diegueño or other Yuman languages (Hinton 1991), although lexical evidence for a Yuman substratum is sparse (Bright and Bright 1969).

The internal diversity of the Numic subfamily is more shallow than Takic, with a maximum time depth of between 1,500 and 2,000 years. There are three branches—Western, Central, and Southern Numic—each consisting of a dialect chain in which at least two languages are generally identified. These chains converge geographically—and their internal differences are greatest—on the eastern slope of the Sierra Nevada between Mono Lake and Tehachapi Pass, indicating a recent southwest to northeast expansion across the Great Basin (Lamb 1958). An estimate of 1,000 years for the time depth of the split between the Numic dialect chains correlates well with archaeological indications of a change of subsistence strategies and social structures in the Great Basin beginning about 800 years ago (Bettinger and Baumhoff 1982). Expanding Western (and possibly Central) Numic probably replaced Plateau Penutian languages (ancestral Maiduan, Klamath, Modoc, Molala, and Sahaptian). Southern Numic, on the other hand, expanded into territory in which Anasazi Pueblo influence had been strong, and possibly replaced either a Kiowa-Tanoan language or a variety of Hopi.

An alternative hypothesis, identifying the proto-Numic community with the Virgin River Anasazi in southern Nevada and southwestern Utah, has had its adherents, notably Gunnerson (1962). A variant of this proposal has recently been put forward by Hill (2002). In her reconstruction, the Numic pioneers of the central and northern parts of the Great Ba-

sin would have expanded north from the historical Southern Numic area on the Colorado Plateau as the result of “devolution” from Anasazi maize farming to a dispersed foraging subsistence strategy. The reconstructability in proto-Numic of a number of words that point to a former acquaintance with horticulture seems to support her argument. Hill explains the dialectal complexity of the Mono-Panamint-Kawaiisu area as the result of rapid innovation as Numic dialects were incorporated into the communicational matrix of the California area.

While linguistic evidence indicates that Numic is closer to Hopi than to either Tubatulabal or Takic (Manaster Ramer 1992), there is evidence that a secondary period of contact between Hopi and both the Numic and Takic languages may have begun around cal A.D. 500. At this time the archaeology of the eastern Mojave Desert shows a major discontinuity that appears to be linked to the expansion of the Western Anasazi from the Virgin River area of southern Nevada as far west as Halloran Spring and Soda Lake (Warren and Crabtree 1986:189–191). Since the Western Anasazi were closely connected to the ancestral Hopi, some of the distinctly “Puebloid” features of Takic religion and ceremony, possibly including complex ritual speech patterns, might have found their way into California at this time.

PENUTIAN

Languages belonging to the Penutian stock are spoken as far north as southeastern Alaska (Tsimshianic). The majority are in Oregon, both east and west of the Cascades (Figure 6.4). The Penutian languages of the California culture area are the southernmost whose relationship to the stock is clearly established, although proposals of varying degrees of likelihood have been made to include Zuni and several Mesoamerican languages in the Penutian relationship. These potential outliers excluded, the time depth of the stock strikes most specialists as comparable to Indo-European (ca. 6,500 years ago).⁵

The Penutian languages historically spoken in California appear to represent at least two (and probably three) separate branches of the stock. Maiduan is probably best included in the Plateau Penutian branch, together with Klamath-Modoc, Molala, and Sahaptian (Berman 1996). Wintuan also shows strong structural connections to Plateau Penutian but shares considerable vocabulary with the Western Oregon Penutian languages, particularly Alsea (Golla 1997). The remaining California Penutian languages, those belonging to the Miwok, Costanoan (or “Ohlonean”),



Figure 6.4. Probable origins and movements of California Penutian groups.

and Yokuts subfamilies, constitute a separate branch of Penutian ("Yok-Utian") that appears to have no other members (Callaghan 1997, 2001).

The geographical distribution of the Penutian languages in western North America is best explained by hypothesizing an ancient continuity of Penutian dialects on the Columbia Plateau and northern portions of the Great Basin with a series of coastward migrations bringing Penutian speakers west of the Cascades and Sierra Nevada at various times. In such a scenario, Yok-Utian speakers would have entered central California across the Sierra Nevada, Maiduan would be a displaced remnant of a Penutian speech area in the basin-plateau, and Wintuan, with its roots in the same area, would reflect a complex migration, first west into central Oregon and later south into California. Needless to say, such a reconstruction is highly speculative.

Yok-Utian

Yok-Utian has two distinct subbranches, Miwok-Costanoan (or "Utian") and Yokuts. The time depth of the Miwok-Costanoan split appears to be on the or-

der of 4,000 to 4,500 years. The reconstructed plant and animal lexicon of proto-Utian indicates that it was spoken in or around the Sacramento-San Joaquin Delta, suggesting a correlation between the proto-Utian community and the Windmill Pattern, which developed in the delta area after 4,400 years ago. The well-established archaeological connection between the Windmill Pattern and northern Great Basin and plateau traditions, most notably the Lovelock Culture of northwestern Nevada, is also consistent with a Yok-Utian correlation.

The expansion of the Windmill Pattern into the Coast Range and the San Francisco Bay area after 4,000 years ago can be taken as tracking the westward expansion of Utian speech at this period. Moratto's suggestion that the emergence of the Berkeley Pattern "represents a fusion of older Hokan . . . and intrusive Utian cultural elements in the Bay Area" (1984:553) remains the most plausible scenario. The split between Miwok and Costanoan apparently dates to this period.

The time depth of Yokuts is difficult to estimate, but the small number of significant phonological and morphological differences among Yokuts subgroups (despite often considerable differences in vocabulary) indicates a relatively recent date for proto-Yokuts, probably between 1,500 and 1,000 years ago. The geographical patterning of internal diversity indicates a likely homeland in the foothills of the southern San Joaquin Valley. We thus lack direct evidence on which to reconstruct the deeper prehistory of Yokuts, and a three-millennia gap yawns between the proto-Yokuts period and the most likely date of the split between pre-proto-Yokuts and Utian, around 4,500 years ago. Since a Salinan-like Hokan language apparently formed the substratum for proto-Yokuts, it is reasonable to assume that for much of the pre-proto-Yokuts period a significant part of the speech community was located elsewhere. This could well have included the northern San Joaquin Valley adjacent to early Utian territory, and Whistler (1984) has proposed that the vocabulary distinctive of some of the Delta Yokuts dialects may reflect substratal influence from pre-proto-Yokuts or from an extinct Yok-

Utian language. Equally plausible, however, is that pre-proto-Yokuts was spoken in the Great Basin. Callaghan has recently noted that the plant and animal vocabulary shared by Yokuts and Utian is compatible with a homeland in a much drier environment than central California, and that the two Yok-Utian subgroups may have separated before the Utian migration across the Sierra Nevada. In which case, the speakers of pre-proto-Yokuts may have lingered in the Great Basin until comparatively recent times, eventually moving into California across the southern Sierra Nevada via the routes used in the historic period by the Western Mono. A close connection between Yokuts culture and the prehistoric cultures of the Great Basin has been independently proposed by Dawson on the basis of basketry styles (Fowler and Dawson 1986:728-729).

Maiduan

Maiduan is a family of four closely related languages: Konkow (Northwestern Maidu), Chico Maidu, Mountain (Northeastern) Maidu (often referred to simply as "Maidu"), and Nisenan. Their relationship is a historically shallow one, comparable perhaps to West Germanic, and the northern three—Konkow, Chico, and Mountain Maidu—form a closely knit subgroup, Northern Maidu, vis-à-vis Nisenan (Southern Maidu). That three of the four Maiduan languages were located in the northern third of Maiduan territory indicates a southward spread from a proto-Maiduan homeland. Phonological and morphological features shared by all Maiduan languages suggest that a Hokan language was substratal in this area, most likely Washo.

The presence in Nisenan (but not in the three other Maiduan languages) of a significant number of widespread central California loanwords suggests a recent spread into non-Maiduan—most likely Miwok—territory. Given the shallow differences among the languages, this spread could not have begun before 1,200 to 1,000 years ago and was probably still under way at the beginning of the historic period. The ethnographically salient boundary between foothill and valley cultures (cf. Kroeber 1929) cuts across both the Konkow and Nisenan languages and is reflected only by low-order dialectal differences. This contrasts with the sharp discontinuity of language (or even language family) that is found elsewhere along the eastern edge of the Central Valley—the boundary between the Wintu and the Yana, between the Plains and Sierra Miwok, between the Northern Valley and Delta Yokuts and the Sierra Miwok; and between the Southern Valley and Foothill Yokuts. All of these linguistic boundaries are

at least as old as the beginning of Late Period cultural elaborations ca. cal A.D. 1400. Nisenan and Konkow, however, seem to have spread west only in the past few centuries, long after the large villages along the Sacramento and lower Feather Rivers had developed a society distinct from that of the foothills.

There is evidence, both lexical and grammatical, that Maiduan is to be grouped with Klamath, Molala, and Sahaptian in the Plateau Penutian branch of the Penutian stock (DeLancey 1996; DeLancey and Golla 1997:181). The Plateau Penutian languages, however, are related at a time depth of at least three millennia, indicating that the attested Maiduan languages reflect a diversification that occurred long after the Maiduan branch separated from the other Plateau Penutian languages. The most likely scenario is that the proto-Maiduan speech community is the only surviving portion of a more widespread pre-proto-Maiduan community in the northwestern Great Basin and adjacent Sierra Nevada California that was displaced by the expansion of Western Numic after cal A.D. 1000.

Wintuan

An estimated time depth of 1,500 years for the split between the two branches of Wintuan—Northern (Wintu-Nomlaki) and Southern (Patwin)—correlates well with the inception of the Augustine Pattern in the southern Sacramento Valley around cal A.D. 500 to 600. The most likely scenario is that Wintuan-speaking invaders, armed with the bow and arrow (which makes its first appearance in the central California archaeological record at about this time), began entering parts of the Sacramento Valley sometime before cal A.D. 500. The area they first occupied—probably north of Colusa County—was largely Hokan territory, most likely Pomo. When Wintuans later expanded into the southern half of the valley, they would have encountered Miwok speakers, explaining the numerous Miwok loanwords in Patwin, particularly for the distinctive flora and fauna of the region (Whistler 1977).

Expansion also took place at the northern end of Wintuan territory. The absence of well-marked dialects in most of Wintu territory, contrasting with relatively salient dialect boundaries in Nomlaki and Patwin, argues for the recent expansion of Wintu beyond a core area south and east of Redding. This seems likely to have been correlated with the northward spread of the Augustine Pattern into Shasta County beginning around 1,200 years ago. This process appears to have moved slowly, reaching the more north-

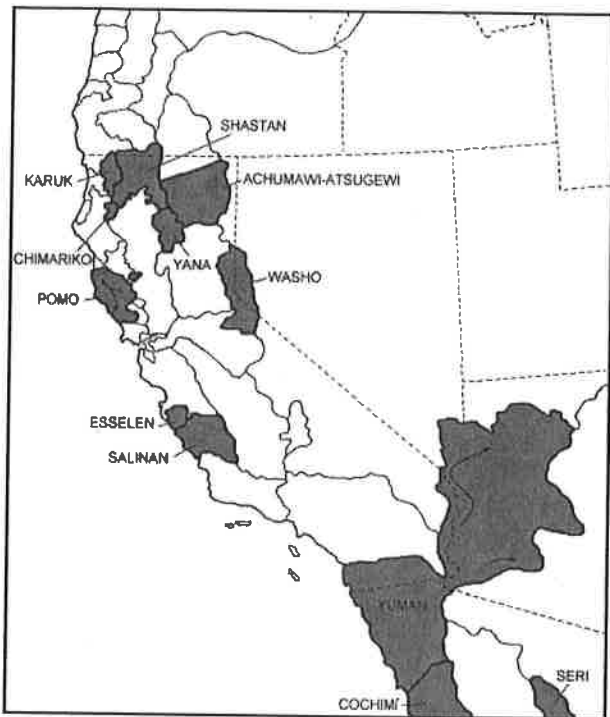


Figure 6.5. Hokan families and isolates of the California area.

erly and westerly areas no earlier than 700 years ago, and could be seen continuing at the time of contact in the eastern part of Trinity River Chimariko territory and along the lower Pit River.

That the original Wintuan homeland was in western Oregon is indicated by the nature of the plant and animal vocabulary that can be reconstructed in proto-Wintuan, which includes no terms for California species that are not found also in western Oregon and many terms for species common to both areas (Whistler 1977). In addition, Wintuan and Alsea, on the central Oregon coast, share a substantial number of lexical resemblances that are best explained as borrowings from Alsea (Golla 1997). These are, however, almost entirely confined to Northern Wintuan (Wintu and Nomlaki), suggesting that there were two Wintuan migrations, one group speaking a dialect with Alsea influences (pre-Northern Wintuan), the other speaking a dialect without such influences (pre-Southern Wintuan).

One possible scenario is that the Wintuans followed two routes into California, possibly at separate times. The pre-Northern Wintuan group might have moved through the Rogue River Valley and Shasta Valley, and then down the Sacramento River, while the pre-Southern Wintuan group might have taken a more westerly route that followed the Coast Range trails, entering the Sacramento Valley in the vicinity of Cottonwood Creek. It seems unlikely that the migrat-

ing Wintuans could have brought with them complex riverine fishing technology or most of the other features of the Augustine Pattern. They probably came in small parties of warlike nomads, not unlike the Athabaskans. Indeed, it seems a plausible hypothesis that most or all of the rugged territory historically occupied by the Oregon and California Athabaskans, from the Umpqua Valley to the Eel River, was at some point occupied by the early Wintuans, and that the Wintuan and Athabaskan migrations were components of a general southward displacement of peoples in California and Oregon in the middle of the first millennium A.D.

HOKAN

The Hokan phylum is the oldest linguistic relationship among western North American languages that can be established by normal comparative linguistic methods. The time depth of the relationship is on the order of 8,000 years ago, making it comparable to the Afro-Asiatic relationship in North Africa and the Near East, which includes Semitic, Ancient Egyptian, Berber, and a number of Sudanic languages. Hokan has no clear high-level subgrouping, and the languages are scattered as classificatory isolates or in subfamily clusters of closely related languages from the California-Oregon border to southern Mexico. The restricted territories of the California Hokan isolates (Chimariko, Karuk, Yana, Esselen, Salinan, Washo) suggest that they are the eroded remnants of formerly widespread language groups (Figure 6.5). This is bolstered by the fact that many Athabaskan, Algic, Uto-Aztecan, and Penutian languages show evidence of substratal influence from one or more Hokan languages. Only two Hokan subfamilies, Pomo and Yuman, exhibit sufficient internal diversity to allow some linguistic perspective on recent prehistory.

Pomo

There are seven historically attested Pomo languages, generally classified into four branches: one for each of the two languages spoken around Clear Lake (South-eastern and Eastern Pomo); a third for Northeastern Pomo, spoken in an isolated location in the western Sacramento Valley; and Western Pomo, which includes the four languages spoken along the Russian River (Northern, Central, Southern, and Southwestern Pomo). The shallower time depth (apparently not much more than 1,500 years) of the Western Pomo branch as compared with the relatively deep split (2,000 years or more) between Eastern and South-eastern Pomo, has led most researchers to assume that the Pomo occupation of the Clear Lake basin is

older than that of the Russian River. Oswalt, whose interpretation is the most widely accepted, sees Clear Lake as the proto-Pomo homeland, with subsequent dispersions to the northeast (Northeastern Pomo) and to the west, and with the Russian River valley first occupied by Pomo-speaking people around cal A.D. 500 (Oswalt 1964).

Whistler (1988), noting the unbroken continuity of the Late Borax Lake Pattern in the Clear Lake basin, proposes that proto-Pomo was spoken there as early as 5,000 years ago, and that "pre-*proto-Pomo*" can be traced back to the arrival of the (Early) Borax Lake Pattern at Clear Lake around 7,000 years ago. Whistler correlates the first movement of the Pomo into the Russian River drainage with the expansion of the Borax Lake Pattern into that area around 4,000 years ago. Although this scenario makes an interesting fit with the archaeological record, the dates are difficult to reconcile with observed Pomo linguistic diversity, which indicates that proto-Pomo was spoken not much earlier than 2,250 to 2,500 years ago.⁶

The Pomo languages have been in contact with Yukian for a long period, and borrowing has taken place in both directions. There are numerous Yukian loanwords in Pomo, some apparently borrowed into proto-Pomo at an early date, others more recently into individual languages (Elmendorf, personal communication, 1984). The earlier borrowings are consistent with the view held by many archaeologists that a Yukian occupation preceded all others in the North Coast Ranges (Fredrickson 1984:509). Pomo influence on (southern) Yukian, on the other hand, may have been an important factor in the development of Wappo.

Miwok influence on Pomo is not extensive, largely confined to lexical borrowing between Lake Miwok and Southeastern Pomo. On the other hand, phonological and grammatical similarities indicate an old and important relationship between Pomo and Wintuan that is not well understood. Among other convergences, Pomo and Wintuan are the only language families in western North America to have a four-way contrast in stop phonemes: plain, aspirated, glottalized, and voiced. Such structural parallels usually reflect sustained contact, but the circumstances under which the southward migrating proto-Wintuan speakers would have had such contact with one or more Pomo languages are not clear.

Yuman

Yuman is a family of eight closely related languages spoken along the Colorado River from the Grand

Canyon to the Gulf of California, on the plateau of northwestern Arizona, and along the Pacific coast of far southern California and far northern Baja California. Kiliwa in Baja California is the most divergent language in the family, and it constitutes an independent subgroup. The other seven languages are divided into four subgroups from south to north: Paipai, Delta-California (Cocopa and Diegueño), River (Quechan, Maricopa, and Mojave), and Upland Yuman or Pai (a cluster of dialects usually referred to individually as Havasupai, Hualapai, and Yavapai). The time depth of Yuman diversification is shallow, certainly no greater than 2,000 years (Hale and Harris 1979), but the family as a whole has a distant but well-established relationship to the Cochimí family of the Baja California peninsula, and Cochimí-Yuman has a time depth at least twice as great.

The River and Delta-California subgroups stand apart from the rest of Yuman in many phonological and grammatical features. Joël speculates that much of this specialization is linked to the rapid cultural changes that followed the adoption of agriculture along the Colorado River, which she dates as late as cal A.D. 800 to 1000 (1964:103–105). Even with these developments discounted, however, it is clear that the greatest differentiation within Yuman lies in the south, and that there was a late expansion of the Pai languages northward.

Since both Yuman and Cochimí are relatively shallowly differentiated and the area in which they adjoin is the most linguistically complex in their combined territories, it is a reasonable speculation that the proto-Cochimí-Yuman homeland was situated in the highlands of northern Baja California and the adjacent Colorado River delta to the east. If it could be shown that some of the languages of the southern tip of Baja California were part of a wider Cochimí-Yuman, a long-term association of the stock with the peninsula would be all but certain. As it stands, however, the only language of this region for which data exists, Waikuri, can only be shown to be of probable Hokan affiliation (Gursky 1966). It is just as likely that the deeper connections of proto-Cochimí-Yuman are to be found in Hokan languages to the north or east.

A link between Yuman-Cochimí and Seri, a Hokan isolate on the eastern shore of the Gulf of California, is suggested by geography. Seri was included in a wider Yuman family by Powell in his general classification (1891), and Kroeber further explored the connection as part of a wider grouping that included Chontal of Oaxaca, or Tequistlateco (Kroeber 1915),

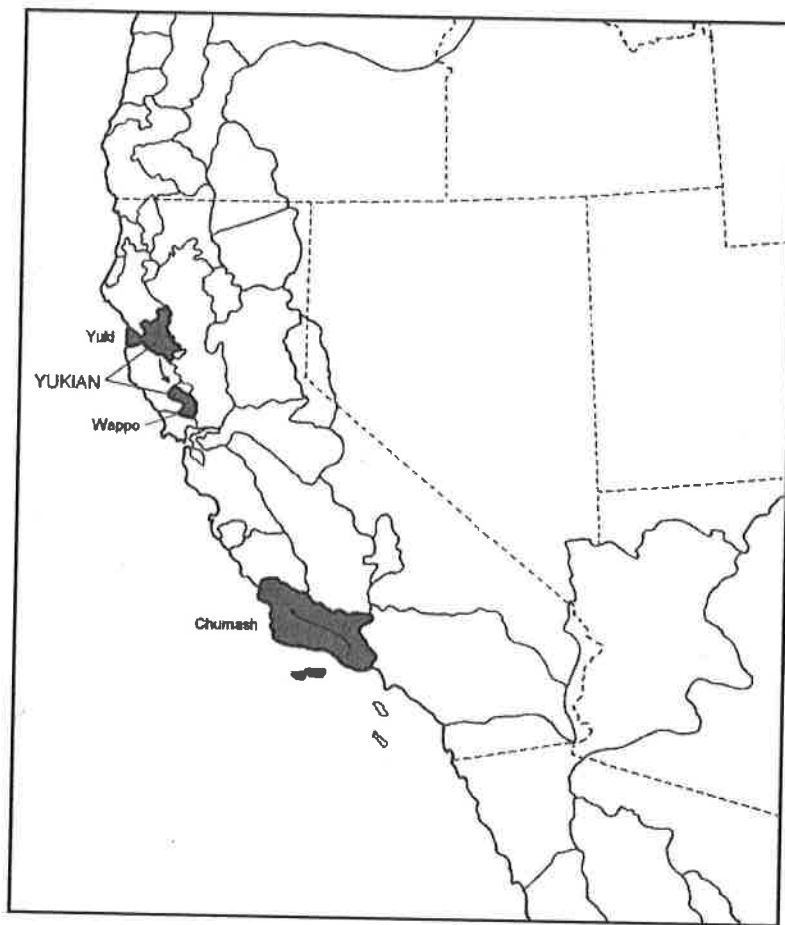


Figure 6.6. Unaffiliated language families of California.

and as a bilateral relationship (1931). The accumulation in recent decades of extensive and accurate data on Seri and the Yuman languages, however, has made it abundantly clear that whatever relationship exists between Seri and Yuman, it is not a close one (Crawford 1976; Hale and Harris 1979:173). Sapir, in his general comparative work on Hokan, saw evidence for grouping Yuman with Esselen, but he put Seri with Salinan (Sapir 1925:525). Although this classification has received some substantiation from lexicostatistics (Bright 1956), it has not been widely accepted.

CHUMASH AND YUKIAN

The Chumash and Yukian language families belong to none of the above groups and have no demonstrated relationship to each other (Figure 6.6).

Chumash

The Chumash (or Chumashan) languages form a close-knit independent family. At one time linguists believed them to be of Hokan affiliation but now most treat them as a classificatory isolate.⁷ Three branches of the family are usually recognized: Obispeño, or North-

ern Chumash, a single language with at least two dialects (Klar 1992:18); Central Chumash, a group of at least four distinct languages (Purísimeño, Ineseño, Barbareño, and Ventureño); and Island Chumash, the language that was spoken on the three inhabited islands in the Santa Barbara Channel, Santa Cruz, Santa Rosa, and San Miguel. Obispeño and Central Chumash are distinct phonologically, lexically, and grammatically. Island and Central Chumash resemble each other more closely, but the relationship is obscured by a recent layer of borrowings into Island Chumash from Ventureño and Barbareño.

The artifactual and skeletal evidence that has been analyzed to date indicates an extraordinary demographic and cultural stability in the Northern Channel Islands and adjacent mainland from the Terminal Pleistocene/Early Holocene (12,500 to 10,000 years ago) to the historic period (Arnold 2001b:13–14). However, the internal diversity within Chumash is no greater than that of Germanic or Romance,

implying a time depth of not much more than two millennia. This suggests that the historic boundaries of Chumash linguistic territory may be the result of the relatively recent expansion of a language originally localized in only one part of that territory, overlying an earlier, much greater linguistic diversity.

It could be hypothesized that this expansion occurred in two waves. An initial expansion early in the first millennium A.D. (if not before) would have brought the language into at least two areas that were originally non-Chumash speaking—in the northwest, where Obispeño shows evidence of having replaced Salinan, or a similar Hokan language, in much of its territory, and on the Channel Islands, where the influence of a substratal language of unknown provenience may be seen in the numerous words that are not cognate with other Chumash languages (Klar 2002:657).

The relative homogeneity of Central Chumash could be accounted for by a second expansion, probably from Ventureño territory, which would have overlaid the earlier Chumash spread with innovative Central Chumash dialects in all but the Obispeño and Island areas. The diversity within Central Chumash

is consistent with a time depth of between 1,000 and 1,200 years, suggesting that the spread of the Central Chumash languages may have been an element in the development of medium-distance trading networks marked by the introduction of plank-canoe technology around cal A.D. 700 to 1000 (Arnold 2001b).

Yukian

The Yukian family consists of two quite distinct languages, Northern Yukian and Wappo, with Northern Yukian divided into three distinct dialects or emergent languages, Yuki, Huchnom, and Coast Yuki. The differentiation within Northern Yukian does not appear to be older than 1,000 years. The dialectal divisions within Wappo are even shallower.

Elmendorf's glottochronological calculations put the date of separation between Northern Yukian and Wappo at approximately 3,000 years ago (1968:178). Although this gives the split a much greater time depth than earlier estimates, such as Kroeber's 500 years ago (1925:218), it fits well with recent syntheses of North Coast Range archaeology. Thus Fredrickson, on the basis of archaeological correlations, dates the expansion of Pomo groups into the Russian River Valley to the Middle Archaic Period between 5,000 years and 3,000 years ago (1984b:510). If the pre-Pomo language of this area was Yukian, as seems likely, this expansion could have been the catalyst that separated early Wappo from the rest of Yukian around the date that Elmendorf's calculations suggest. However, a 1500 cal B.C. date for Western Pomo expansion is difficult to reconcile with linguistic estimates of the age of the Pomo family, which are on the order of 2,000 to 2,500 years ago.

Whenever and wherever Wappo diverged from Northern Yukian, it probably involved substantial influence from Pomo, since a number of the phonological and grammatical differences between Northern Yukian and Wappo are best explained as a "Pomoization" of the latter. Miwok influence on Wappo, by contrast, is largely confined to superficial lexical borrowing. This is consistent with a late date for the Wappo occupation of the Napa Valley, where an older Miwok population appears to have been absorbed. A correlation of a Wappo intrusion with the beginning of the St. Helena Aspect of the Augustine Pattern, around 1500 years ago, is generally accepted (Fredrickson 1984:511).

PREHISTORIC IMPLICATIONS

The earlier history of the Chumash and Yukian languages is highly speculative. Physical and archaeological associations point to the possibility that both

speech communities represent the survival of very old linguistic traditions along the California coast.

The physical characteristics of the (Northern) Yuki-ans and their immediate Athabaskan neighbors—long-headedness and very short stature—indicate an isolated gene pool that could well be, as Kroeber proposed (1925:159), a relict population from the earliest peopling of California. Their well-attested hostile relationships with neighboring groups could be seen as a social adaptation that has promoted long-term ethnic survival; they are the Basques of northern California. If this view is correct, an early form of Yukian could well have been the basal linguistic stratum in a significant part of California. There is indeed some evidence of this. In an unpublished paper, Elmendorf (1984) compiled a list of words shared by Yukian with other California languages—most of them likely to be borrowings in one direction or the other. He found 30 or more words shared with adjacent Wintuan, Pomo (many with proto-Pomo), and Miwok (many with proto-Miwok). Among nonadjacent languages, the largest number of sharings was with Wiyot (23), Yokuts ("a fair number"), Chumashan (25 to 30), and Uto-Aztecan (35 or more). Smaller numbers were shared with Chimariko (14) and Maiduan (12). Few or none were shared with Karuk, Shasta, Palaihnihan, Salinan, and Esselen.

Substantial numbers of lexical resemblances have also been adduced between Yukian and Siouan, Yuchi, and the Gulf languages (Elmendorf 1963; Munro 1994). These are not easily dismissed, but the geographical discontinuity is enormous. It is highly unlikely that the linguistic similarities reflect direct connections more recent than the Archaic, although proposals for an improbable Yukian hegira to California from the Southeast (or vice versa) have been made (Swadesh 1954:324). A more plausible hypothesis would be that certain languages of the Gulf Coast and Mississippi Valley share a remote common parentage with what could be argued is the earliest stratum of languages along the Pacific coast—Yukian, Chumash, the language substratal to Island Chumash, and possibly one or more of the languages at the southern tip of Baja California—and reflect an early coastal pattern of settlement of the continent during the Terminal Pleistocene and Early Holocene.

NOTES

1. The classification of California Indian languages at the language family and phylum level is admittedly not cut-and-dried. With Athabaskan (the focus of my own primary research), Algic, and Uto-Aztecan there is a firm consensus